



CONTACT DERMATITIS AND OCCUPATIONAL DERMATOSES

## COMMON ALLERGENS IDENTIFIED BASED ON PATCH TEST RESULTS IN PATIENTS WITH FACIAL DERMATITIS: A FOUR YEAR RETROSPECTIVE REVIEW

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Background: Facial allergic contact dermatitis is common and may be caused exposure to cosmetic products on affected skin. Eliciting a careful history and patch testing are essential to find the responsible allergen and prevent relapses.

Objective: To investigate the spectrum of allergens in facial dermatitis in our patch testing (PT) centre.

Materials and Methods: We conducted a retrospective review of records of all patients who underwent PT between 2013 and 2017 in Singleton Hospital, Swansea, UK. PT was performed according to ICDRG guidelines and BSCA best practice with IQ Chambers and allergens from Chemotechnique Diagnostics (Sweden), including the BSCA standard, hairdressing and facial series. Percentage prevalence of each allergen was calculated. Pearson's correlation coefficient (r) was used to assess linear correlations between each allergen pair.

Results: 432 patients were identified. 118/432 (27%) patients were referred with localised facial dermatitis. 61/118 (53%) were diagnosed with ACD. The commonest allergens identified included nickel (21.2%), limonene (11.9%), linalool (8.5%), methylchloroisothiazolinone (MCI)(8.5%), methylisothiazolinone (MI)(8.5%), cobalt (5.9%), Myroxylon pereirae (MP) (5.9%), sodium metabisulfite (5.9%), fragrance mix I (5.1%), paraphenylenediamine (PPD)(5.1%), fragrance mix II (3.4%), 4-aminophenol (2.5%), toluene-2,5-diamine (2.5%), nitro-p-phenylenediamine (2.5%), sorbic acid (2.5%) and tea tree oil (2.5%)

Weak correlations were found between nickel and cobalt ( $r=0.31$ ), limonene and linalool ( $r=0.45$ ), linalool and MP ( $r=0.31$ ), MP and fragrance mix I ( $r=0.43$ ), fragrance mix II and formaldehyde ( $r=0.34$ ), sorbic acid and tea tree oil ( $r=0.49$ ). Strong correlations were found between MCI and MI ( $r=0.89$ ), and between PPD, 4-aminophenol and toluene-2,5-diamine ( $r=0.70$ ).





Conclusions: Our small study shows that facial ACD is in line with patch test results in general, although allergens such as sodium metabisulfite were found to be prevalent. Perhaps this should be also considered in the routine series for patients who present with facial dermatitis.

